

# **THE CHALLENGE OF DEVELOPMENT AND POVERTY IN BUNDELKHAND REGION OF U.P.**

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## 1. Introduction

The Bundelkhand region of Uttar Pradesh comprises two divisions, viz. Chitrakoot and Jhansi and a total of seven districts, namely, Banda, Chitrakoot, Hamirpur, Mahoba, Jalaun, Jhansi and Lalitpur. Two of these districts, i.e. Mahoba and Chitrakoot are newly created districts carved out of the erstwhile districts of Hamirpur and Banda respectively. Mahoba was declared a district on 10.02.1995, while the status of a district was granted to Chitrakoot on 4.09.1998.

The region is located in the southern Vindhyan plateau. The resource base of the region is poor and insufficient to sustain the human and livestock population. Productivity of the resources such as land, water, forest and livestock is also low. A significant part of the land is barren and rocky.

The region further suffers from low and unreliable rainfall and extreme climatic conditions. The average rainfall of the region as a whole is around 750 mm, much below the state average. Variation in rainfall is observed across districts in the region. Lalitpur has relatively higher rainfall, while Mahoba gets the least rainfall. The region has suffered from deficiency of rainfall over the last four years resulting in drought conditions.

Extreme temperatures are found during summer and winter. During May and June the temperature gets as high as 46 – 48° Celsius, while in December and January it can get as low as 1° Celsius. As a result of the high temperature during summer season the rate of evaporation increases causing ponds and lakes to dry up thereby adding to the misery of the people.

Mainly two types of soils are found in this region. *Parwa* and *Rankar* fall in the first category. These soils do not have water-retaining capacity. Consequently the moisture content of the soil remains low. In the second category are *Maar* and *Kawar* types of soils. Though these soils have a relatively higher water retention capacity, they too suffer from some disadvantages. These soils tend to swell up during the rainy season and then do not allow the excess water to seep down to the lower level causing water logging. Moreover, during the summer season these soils tend to dry up and develop cracks. Consequently the moisture which has been retained below evaporates. Because of this peculiarity of these two soils it becomes essential to carry out the task of sowing, weeding and pruning at the appropriate time otherwise various problems are faced in carrying out these operations.

The typical qualities of soil and extreme climatic conditions also affect the productivity of forestry based products, horticulture, agricultural crops and livestock, which suffers for want of adequate fodder. In spite of the inhospitable land and climate the dependence on agriculture remains high as the industrial base of the region is not strong.

There is, thus, a need to chalk out an integrated scheme of development through which these bottlenecks can be suitably overcome and a positive dent is made on the levels of poverty, employment, income generation and overall levels of living of the people in the region.

In this study an attempt has been made to analyze the levels of agricultural, industrial and infrastructural development of Bundelkhand region and assess the extent to which it compares with the State as a whole with respect to some key indicators of development. On the basis of the analysis an effort has been made to suggest some policy measures to counter the adverse conditions and bring about higher levels of development in the region.

## **2. Area and Population**

The details of area and population for Bundelkhand and its districts are presented in Table 1. The region is spread over an area of 29,418 sq. kms. which constitutes roughly 12 per cent area of the state. Lalitpur is the largest district whereas the area of Mahoba is the least. Total population of the region as per the Census of 2001 was 82.3 lakhs, which was less than 5 per cent of the total population of the State. Among the districts the most populated is Jhansi while Mahoba continued to be the district with lowest population as was the case with respect to area. The decadal growth of population worked out to 22.35 per cent and this was lower than the growth of 25.85 per cent for the State as a whole. Since the proportion of area is higher than the share of population it was quite obvious that density of population would be low (280 persons per sq. km.). Even with respect to sex ratio the region has a lower figure of 863 while the corresponding figure in U.P. is 898. Purely on the basis of figures the share of urban population to total population (22.4 per cent) is above the State average (20.8 per cent) but a closer look on a district-wise basis reveals that the figure is distorted because Jhansi, the most populous district has an urban population of approximately 41 per cent. In fact as many as four districts have figures ranging between 10-17 per cent. The region also has a relatively higher share of SC population (25.1 per cent) while that of the State is 21.1 per cent.

**Table 1: Area and Population Details of Bundelkhand**

Details	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot	Bundelkhand	U.P.
Area (sq. kms)	4565	5024	5039	4282	2884	4460	3164	29418	240928
Total Population 2001 in lakh	14.55	17.45	9.78	10.44	7.08	15.37	7.66	8.23	1661.98
Decadal Variation (1991-01)	19.28	22.05	30.01	18.00	21.73	21.42	28.56	22.35	25.85
Density of population per sq. Km.	319	347	194	244	246	345	242	280	690
Sex Ratio	849	871	882	851	866	860	873	863	898
% of Urban Population	23.4	40.8	14.5	16.7	21.9	15.9	10.0	22.4	20.78
% of SC Population	27.04	28.07	24.93	22.79	25.78	20.83	26.34	25.14	21.15
% of ST Population	0.01	0.06	0.00	0.02	0.01	0.00	0.00	0.02	0.06

*Source: District Development Indicators 2007, Department of Economic and Statistics, SPI, UP*

### 3. Land Utilization in the Region

Details of land utilization for the Region as a whole have been shown in Table 2. Only 8 per cent area is under forests, which is much below the norm prescribed under the National Forest Policy of 1988 under which forest cover should be over 33 per cent of the total area. Forest cover is also of a very poor quality. Area under barren and uncultivable land and cultivable waste has declined from around 11.5 per cent in 1990-91 to approximately 8 per cent in 2003-04. Net area sown has registered a corresponding increase from 65.10 per cent to 68.57 per cent during the same time period. Cropping intensity is very low though it has gone up from 113.0 to 125.6 per cent between 1990-91 and 2003-04. Still it is much below that of the state. Current fallows show an increase over time but old fallows have gone down.

**Table 2: Land Utilization Pattern of Bundelkhand (Area in Hectares)**

Land Use Category	Bundelkhand				UP (000)
	1990-91	1995-96	2000-01	2003-04	2004-05
Reporting Area	2959985	2961272	2958534	2958534	24201
Forest	247210	249848	268660	236673	1688
	(8.35)	(8.44)	(8.08)	(8.00)	(6.67)
Barren and Uncultivable Land	123890	120431	115462	113878	530
	(4.19)	(4.07)	(3.90)	(3.85)	(2.19)
Land put under non agricultural uses	195740	205036	210693	238286	2648
	(6.61)	(6.92)	(7.12)	(8.05)	(10.94)
Cultivable Waste	213519	190419	142145	121042	454
	(7.21)	(6.43)	(4.80)	(4.09)	(1.88)
Permanent Pastures & Other Grazing Land	8035	3876	5405	5578	64
	(0.27)	(0.13)	(0.18)	(0.19)	(0.26)
Land Under Misc. Trees, Groves etc.	18829	16744	10746	39781	343
	(0.64)	(0.57)	(0.36)	(1.34)	(1.42)
Current Fallow	116506	128512	145904	115413	1217
	(3.94)	(4.33)	(4.94)	(3.90)	(5.03)
Other Fallow	109293	100623	74221	59556	574
	(3.69)	(3.40)	(2.51)	(2.01)	(2.37)
Net Area Sown	1926963	1945783	1985298	2028327	16683
	(65.10)	(65.71)	(67.11)	(68.57)	(68.94)
Area Sown more than once	250775	273394	388669	519961	8841
Total Cropped Area	2177738	2219177	2373967	2548288	25524
Cropping Intensity	113.01	114.05	119.57	125.63	153.4

*Note: Figure in Brackets indicate % to total Reporting Area.*

*Source: Agricultural Directorate, Govt of UP, Lucknow*

#### **4. Level and Sources of Irrigation**

Because of its rocky terrain area irrigated in the region is much lower than in the State as a whole. For example, during 1991-92 irrigated area as a percentage of net sown area was barely 34.4 per cent, which went up to 50 per cent by 2004-05. As against this the corresponding percentages recorded for the entire state were 64.2 and 78.6 respectively. When we look at the

irrigation by different sources it is found that there is a heavy dependence on canals in case of Bundelkhand where almost 60 per cent of the irrigated area was under canal irrigation during 1991-92 (Table 3). In other parts of the State tubewells are the dominant source of irrigation. By 2004-05 dependence on canals had gone down considerably to around 46 per cent while the share of tubewells in total irrigated area has increased to around 43 per cent.

**Table 3: Net Irrigated Area by Different Sources (Percent)**

Source of Irrigation	Bundelkhand		Uttar Pradesh	
	1991-92	2004-05	1991-92	2004-05
Canals	59.22	45.83	29.04	20.52
Tubewells and Wells	30.97	43.43	66.89	77.33
Tanks and Lakes	1.19	9.36	0.78	1.10
Other Sources	8.62	1.38	3.29	1.05
Total	100.00	100.00	100.00	100.00
Irrigated Area as a % of Net Area Sown	34.40	50.10	64.20	78.60
Irrigation Intensity	106.70	107.27	139.60	144.37

*Source: Directorate of Agriculture Uttar Pradesh*

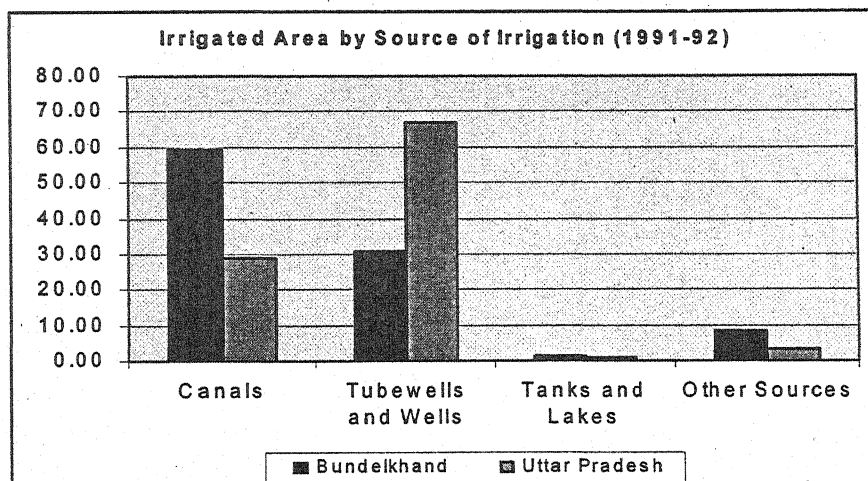
Sharp variations in the level of irrigation are observed at the district level. In Lalitpur over 80 per cent area is irrigated. On the other hand, in Chitrakoot only one fourth of cultivated area is irrigated, while in Hamirpur and Banda this proportion is about one-third only (Table 4). The relative importance of different sources of irrigation also varies among the districts. This over two third area in Banda and three-fourth area in Jalaun is irrigated by canals. Tube wells are the most important source of irrigation in Jhansi, Hamirpur, Mahoba and Chitrakoot. Tanks are also an important source of irrigation in Lalitpur, Mahoba and Chitrakoot. Irrigation intensity is very low except in Banda.

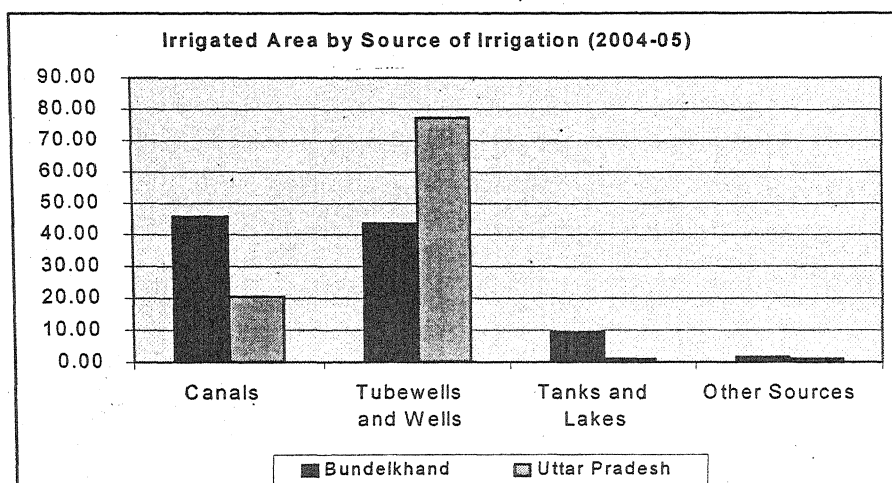


**Table 4: District wise Net Area Irrigated by Different Sources in Bundelkhand (Percent)**

Details	Year	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot	Bundelkhand	U.P.
Canals	1991-92	80.78	53.00	40.16	52.53	NA	70.18	NA	59.21	29.03
	2004-05	75.03	37.73	33.32	35.58	29.91	65.90	28.14	45.83	20.52
Tubewells & Wells	1991-92	18.33	42.07	32.96	37.56	NA	22.93	NA	30.97	66.89
	2004-05	22.79	54.28	46.45	59.87	50.20	29.49	49.96	43.43	77.32
Tank & Lakes	1991-92	0.04	0.83	3.31	1.48	NA	0.37	NA	1.19	0.78
	2004-05	1.89	6.82	16.97	2.54	18.73	4.44	21.83	9.37	1.10
Other Sources	1991-92	0.85	4.10	23.57	8.43	NA	6.52	NA	8.62	3.29
	2004-05	0.29	1.17	3.26	2.00	1.16	0.17	0.07	1.38	1.06
Total	1991-92	100.00	100.00	100.00	100.00	NA	100.00	NA	100.00	100.00
	2004-05	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Irrigated Area as a % NSA	1991-92	32.90	39.90	54.10	29.00	NA	28.80	NA	34.40	64.20
	2004-05	55.80	62.80	80.90	34.40	46.70	35.20	26.30	50.10	78.60
Irrigation Intensity	1991-92	102.44	102.16	101.88	102.41	NA	122.56	NA	106.75	139.63
	2004-05	102.61	101.40	100.62	103.55	102.10	145.67	104.43	107.27	144.36

Source: Directorate of Agriculture Uttar Pradesh





## 5. Relative Backwardness of Bundelkhand Region

Bundelkhand region is regarded as a relatively less developed region of the state. Table 5 presents data on selected indicators for various sectors of the economy such as agriculture, industry and infrastructure for different regions of the state. Out of the four regions of the state Bundelkhand is the worst placed region as far as indicators of agricultural development like irrigation facilities, fertilizer consumption and cropping intensity. Average size of holding in the region is almost double of the state average, but land quality and productivity is low. Indicators of industrial development present a mixed picture. Though the region has the largest number of small scale units per lakh of population, the number of workers in the registered factories per lakh of population is the lowest in the region.

The picture is again mixed in respect of infrastructure. Road infrastructure in the region is the least developed both in relation to area and population. Electricity consumption per capita is also very low in comparison to the state average and that of the developed regions. However, over 90 per cent of the villages in the region are electrified. Number of telephone connections in the region is relatively low but mobile connectivity is better as compared to other regions. In banking facilities also the region is relatively better placed.

**Table 5: Regionwise Indicators of Economic Development in U.P.**

Indicators of Development	Western Region	Central Region	Bundelkhand Region	Eastern Region	Uttar Pradesh	Rank of Bundelkhand
<b>Agriculture and Irrigation</b>						
% of net area irrigated to net sown area (2004-05)	91.40	81.60	50.10	73.50	78.60	4
% of Gross Irrigated area to Gross Sown Area (2004-05)	86.60	77.00	43.20	67.70	74.20	4
% Share of Private Pump sets/Tubewells (2006-07)	41.80	18.70	1.90	37.60	100.00	4
% Share of Public Tube Wells (2006-04)	35.90	15.10	5.50	43.40	100.00	4
Average Land Holding Size (ha)	0.96	0.80	1.56	0.65	0.83	1
Cropping Intensity (2004-05)	160.75	152.99	124.28	155.05	153.00	4
Total Fertilizer Consumption per hectare of Gross Cropped Area (Kgs) (2005-06)	160.66	127.42	41.61	139.57	135.72	4
<b>Industry</b>						
Industrial Area Per Lakh of Population (2005-06)	0.10	0.12	0.13	0.04	0.08	1
Small Scale Units per lakh of Population (2006-07)	20.60	14.70	21.94	10.05	15.37	1
Value added per worker in registered factories (2003-04) (Rs)	579.37	423.49	832.49	588.71	558.11	1
No. of persons employed in registered factories per lakh of Population (2003-04)	483	243	66	105	267	4
Average employment per registered factory (2003-04)	24.00	22.70	25.90	41.80	33.80	2
<b>Road Development (2005-06)</b>						
Total Road Length per lakh of pop (kms)	85.11	101.17	111.6	83.93	88.85	4
Total road Length per '000 sq km of area (Kms)	713.92	730.53	337.72	712.75	670.73	4
<b>Electricity (2006-07)</b>						
Per capita electricity Consumption (kwh)	246.4	204.1	141.8	113.5	180.4	3
% of Electrified Villages	88.71	91.65	93.93	80.80	85.32	1
<b>Financial Infrastructure</b>						
Credit Deposit Ratio (2006-07)	53.67	46.57	57.75	30.69	45.14	1
Commercial Bank Branches per lakh of population (2006-07)	4.90	5.20	4.90	4.10	4.60	2
<b>Communication (2006-07)</b>						
Mobile Connection per lakh of Population	1437.80	1537.80	3277.70	2114.40	1817.00	1
Post Offices per lakh of population	8.70	9.70	12.50	9.80	9.50	1
Telephone connections per lakh of population	1995	1638	1401	1063	1527	3
PCO per lakh of population	83.02	93.01	80.26	103.00	92.71	4

Source: District Development Indicators 2007, Department of Economic and Statistics, SPI, UP



In terms of social indicators the region is relatively more developed. It ranks first among all the four regions in terms of various medical facilities in relation to population. Same is true for school facilities and teacher-pupil ratio. Male literacy and total literacy is also the highest in the region. Female literacy in the region is above the state average but slightly below that of West U.P. and Central U.P.

In short, in terms of economic and social infrastructure Bundelkhand does not seem to suffer from any relative disadvantage. The region is, however, lagging behind in agricultural and industrial development. The main handicap of the region is in terms of its physical and geographical features, which pose a problem in development of the agricultural sector. The status of the agricultural sector in the region has been examined in the next section.

**Table 6: Regionwise Indicators of Social Development in U.P.**

Indicators of Development	Western Region	Central Region	Bundelkhand Region	Eastern Region	Uttar Pradesh	Rank of Bundelkhand
<b>Health (2006-07)</b>						
Allopathic Hospitals/Dispensaries per lakh of pop	2.54	3.13	5.34	2.99	2.97	1
No. of beds per lakh of population in Allopathic Hospitals/Dispensaries	33.18	50.57	47.00	32.63	36.80	1
Ayurvedic/Unani/Homeopathic Hospitals/Dispensaries per lakh of population	1.64	2.16	3.23	2.29	2.07	1
No. of beds per lakh of pop in Ayurvedic/Unani/Homeopathic Hospitals/Dispensaries per lakh of population	4.90	5.89	8.40	6.06	5.72	1
PHC's Per lakh of Population	1.51	1.67	2.84	1.75	1.70	1
Mother and Child Care Centres per lakh of population	10.69	11.46	15.76	11.50	11.40	1
<b>Education (2006-07)</b>						
Literacy Percentage (2001)						
Total	57.36	57.58	59.30	54.27	56.27	1
Male	68.84	68.06	73.13	68.60	68.82	1
Female	43.96	45.52	43.11	39.13	42.22	3
<b>Educational Infrastructure</b>						
Jr Basic School per lakh of Population	75	68	104	68	74	1
Sr. Basic School per lakh of population	24	22	39	22	24	1
Higher Secondary Schools per lakh of population	9	8	7	8	8	1
No. of Students per teacher in JBS	86	90	74	90	88	1
No. of Students per teacher SBS	78	86	35	95	82	1
No. of Students per teacher HSS	51	42	40	52	49	1
Gross Enrolment Rate in JBS	60.1	76.57	86.19	69.9	67.85	1
Gross Enrolment Rate in SBS	88.62	93.25	128.02	105.48	98.07	1

Source: District Development Indicators 2007, Department of Economic and Statistics, SPI, UP

## 6. Agricultural Situation

A variety of crops including cereals, pulses, oilseeds are grown in the region (Table 7). Among the cereals wheat is the most important crop of the region. Around one-fourth of the gross cropped area of the region is under wheat. Between 1990-91 and 2004-05 the total area under wheat has gone up by over 50 thousand hectares. It is found that around 90 per cent of the total area on which wheat is grown is irrigated. The districts having high area under the crop are Jhansi, Jalaun and Banda. These three districts together accounted for almost 55.5 per cent of the total cropped area under wheat in Bundelkhand region as a whole. Along with fluctuations in area there have also been fluctuations in total wheat production as well as in productivity figures. Despite the fact that average yield has gone up from 15.82 quintals per hectare in 1990-91 to 20.73 quintals per hectare in 2004-05, it had touched a peak of 23.33 quintals per hectare during 2001-02. However, the region has always lagged behind the State average by around 5 quintals per hectare. When we look at the districts individually Jalaun stands out as the district with high levels of productivity. To begin with it lagged behind the average yield obtained in the State but since 1998-99 yield rates of the district have always been higher as compared to the State.

**Table 7: Cropping Pattern in Bundelkhand, 2004-05**

Crop	Area under the crop as % of Gross Cropped Area of the Region	Area under the Crop as % of Total area under the crop in the State	Main Districts where Crop is grown
Wheat	25.49	6.87	Jhansi, Jalaun
Rice	3.60	1.53	Banda
Jowar	3.72	38.58	Banda, Hamirpur, Chitrakoot
Bajra	0.97	2.78	Jalaun, Chitrakoot (Earlier Banda also)
Maize	1.41	4.25	Lalitpur alone has 93% of area
Gram	17.93	65.40	Banda and Hamirpur
Total Pulses	55.46	49.77	Jhansi & Jalaun
Total Foodgrains	95.71	11.88	All districts, but low area in Chitrakoot & Mahoba
Total Oilseeds	6.25	17.51	Jhansi, Jalaun & Mahoba
Potato	0.07	0.38	Jhansi & Lalitpur
Sugarcane	0.29	0.37	Jalaun, Hamirpur & Mahoba

Source: Directorate of Agriculture Uttar Pradesh

Area under paddy is quite low. The only district with a significant area under paddy is Banda. In 2004-05 the area under paddy in Banda was almost 80 per cent of the entire area under paddy in the region as a whole. But the figures of area over the years indicate a somewhat declining trend in the district and total area has actually shown a decline of over 2200 hectares in 2004-05 as compared to 1990-91. Not only is the area rather low, even the yield rates (10.49 quintals per hectare) were very low as compared to the State average (18.11 quintals per hectare) during 2004-05.

As far as the coarse foodgrains such as jowar, bajra and maize are concerned, jowar is most important crop with 3.7 per cent of the total cropped area of the region under this crop. Its significance can be seen from the fact that during 2004-05 total area under jowar was 93962 hectares, which 38.5 per cent of the entire area covered under the crop in U.P. as a whole. One of the advantages of the crop is that it is grown on unirrigated land and so it is quite suitable for a region like Bundelkhand where the area under irrigation is quite low. The main jowar growing districts are Hamirpur, Banda and Chitrakoot. These three districts taken together accounted for around 74 per cent of the entire area of the region. However, their contribution towards total production was only around 54 per cent as in each district the average yield was below the overall regional average. The average yield in the region is marginally lower when compared with the state average. Jalaun had the highest yield rate which was even higher than the State average, but the total area under the crop was rather low.

Bundelkhand region, over the years, has made significant strides in production of pulses especially gram. Total area under the crop is around 18 per cent of the total gross cropped area of the region, second only to area under wheat. However, the total area covered under gram in the region was 65.4 per cent of the total area under the crop in the entire state during 2004-05. Moreover, the regions share in total gram production in the state was around 52 per cent. This was so because overall yield rates were lower as compared to the State average. The highest area was in Chitrakoot and Mahoba which have the lowest yield rates in the Region. However, what is disturbing is the fact that wide fluctuations are witnessed in the area under gram over the years since 1990-91. The total area under gram is around 1.24 lakh hectares in 2004-05, below what it was during 1990-91. Along with area even the average yield rates have fluctuated from an all time low of 6.48 quintals per hectare in 1991-92 to the highest yield of 9.94 quintals per hectare achieved during 2003-04.

During 2004-05 total area under pulses was to the tune of 14 lakh hectares and this was almost 50 per cent of the area under all pulses combined for the state as a whole. In the case of total pulses it was observed that the productivity level of the region was somewhat higher than the state average and consequently the region contributed around 52 per cent share in the total pulse production of the state. It was encouraging to note that the yield per hectare was higher than the state average in 5 out of the 7 districts of the region. In Banda it was marginally lower than the State average while in Hamirpur it was quite low at 6.59 quintals per hectare. In the case of total pulses it was found that total area has increased from around 10.08 lakh hectares during 1990-91 to 14.02 lakh hectares in 2004-05. However, fluctuations in area were observed till 1996-97 but then a more or less increasing trend has been found. Even in the case

of yield rates year-wise fluctuations are found. Productivity levels had dipped to as low as 6.31 quintals per hectare during 2000-01 while the highest figure of 9.67 quintals per hectare was achieved during 1996-97. The main districts where pulses are grown are Jhansi, Lalitpur, Jalaun and Hamirpur and these districts together account for around two-thirds of the total area under pulses in the region.

Oilseeds are grown over a sizeable area in the region. Around 6.25 per cent of the gross cropped area of Bundelkhand is under oilseeds, accounting for 17.5 per cent of the total area under oilseeds in the State as a whole. Area under oilseed production occupies the third rank after gram and wheat. Banda and Chitrakoot have relatively less area under oilseeds. The most significant district is Jhansi, which alone accounts for around one-third of the total area and around 44.5 per cent of the total oilseed production of Bundelkhand. Unfortunately the yield per hectare is rather low as barely 10 per cent of the area under oilseeds is irrigated as compared to almost 55 per cent irrigated area in the State as a whole. Consequently yield per hectare was only around 5 quintals in the region during 2004-05 while the average yield in the state was around 8.5 quintals.

Besides these crops, potato and sugarcane are also grown in the region but the area is negligible under both crops. In some parts of the region vegetable cultivation has picked up. The region also has favourable conditions for growing citrus fruits.

Average yields in the region are markedly lower than that in the state except in the case of pulses (Table 8). Wheat yield is about 20 per cent lower in the region than the state average, but the gap is almost 40 per cent in case of rice. In case of non-foodgrain crops like oilseeds, sugarcane and potato the yield gap is very substantial.

**Table 8: Average Yield of Major crops in Bundelkhand and U.P. (in Qtls./ha.)**

Crop	Average Yield of the Region	Average Yield of the State	Districts with better yield rate than State Average
Wheat	20.73	25.00	Jalaun (31.79)
Rice	10.49	18.13	
Jowar	9.56	10.23	Jalaun (13.48)
Bajra	9.96	15.20	
Maize	8.98	15.38	
Gram	8.80	9.16	Lalitpur (11.81), Jalaun (10.81), Mahoba (9.40)
Total Pulses	9.01	8.63	Jalaun (12.07)
Total Foodgrains	11.91	19.65	
Total Oilseeds	4.99	8.45	
Potato	172.43	223.83	
Sugarcane	433.67	608.07	

Source: Directorate of Agriculture Uttar Pradesh

The depressed nature of agriculture in Bundelkhand comes out even more sharply when we look at the average yield of some important crops across different regions of the State given in Table 9. It is very evident from the above table that Bundelkhand lags behind all the other regions in terms of average yield with the only exception of total pulses. Even in total pulses the regional average is not very much higher as compared to other regions. The only other exception is that yield rates of potato were marginally higher in Bundelkhand as compared to the Central region. The yield differences are particularly marked when we compare the yields in the region with those in Western U.P., which is agriculturally the most developed region of the state.

**Table 9: Yield Rates of Main Crops among Different Regions of U.P., 2004-05 (in Qtls/ha.)**

Crop	Western Region	Central Region	Eastern Region	Bundelkhand Region	Uttar Pradesh
Wheat	28.93	25.35	21.40	20.73	25.00
Rice	23.05	20.54	14.99	10.79	18.13
Gram	11.55	10.26	8.94	8.80	9.16
Total Pulses	8.04	8.48	8.10	9.01	8.63
Total Oilseeds	11.17	7.10	6.54	4.99	8.45
Potato	252.94	191.09	167.93	172.43	223.83
Sugarcane	650.16	575.92	508.68	433.67	608.07

*Source: Directorate of Agriculture Uttar Pradesh*

The major reason for low yields in the region is lack of irrigation facilities and poor moisture retention capacity of the soil. We have already discussed the situation regarding irrigation facilities. As a result of poor irrigation facilities the use of chemical fertilizers, which play a significant role in enhancing yield of crops, is very low. Thus, the consumption of nitrogenous fertilizers went up from 16.93 kgs per hectare in 1991 to 24.06 kgs during 2001. But, this was only around one-fourth the consumption level obtained in the State as a whole. Similarly consumption of phosphatic fertilizer went up from just below 10 kgs to around 17 kgs, about half the figure for the state as a whole. The region lags behind substantially as far as the use of potash is concerned. There has hardly been any change in consumption between 1991 and 2001 (0.24 and 0.27 kg respectively). Thus the overall fertilizer consumption, taking into account all the three chemical fertilizers together, in Bundelkhand is less than one third of the State average (Table 10).

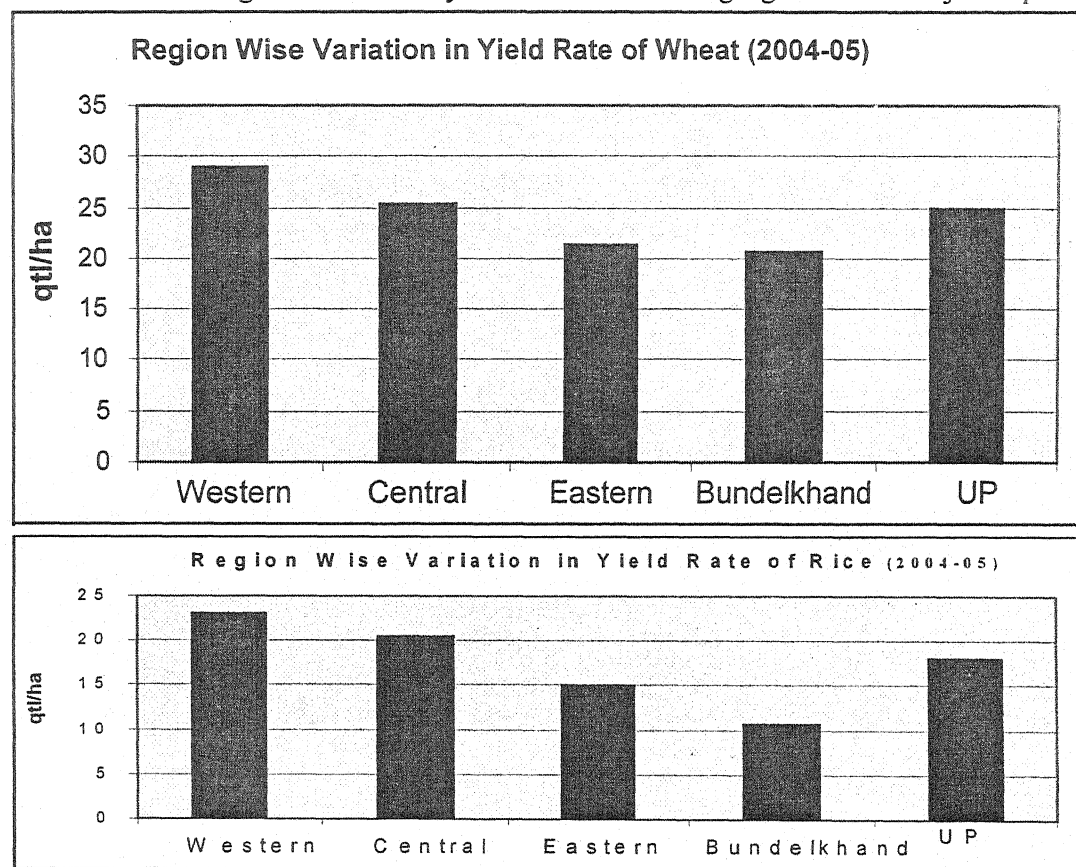


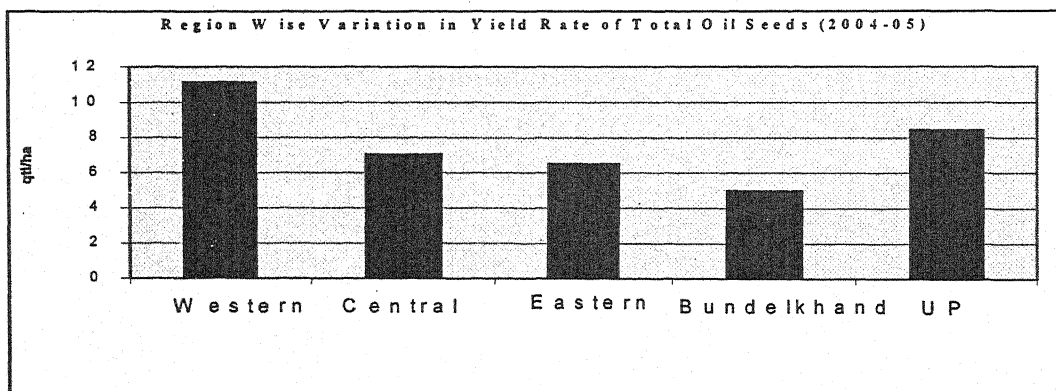
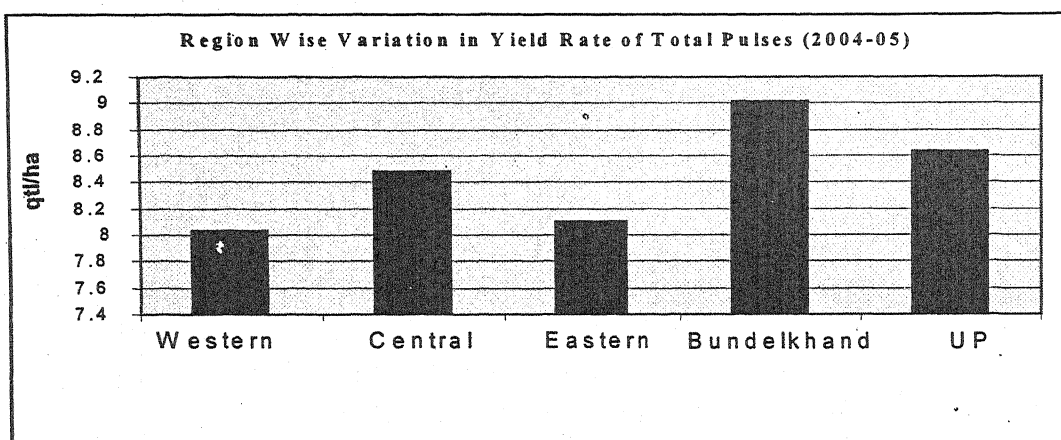
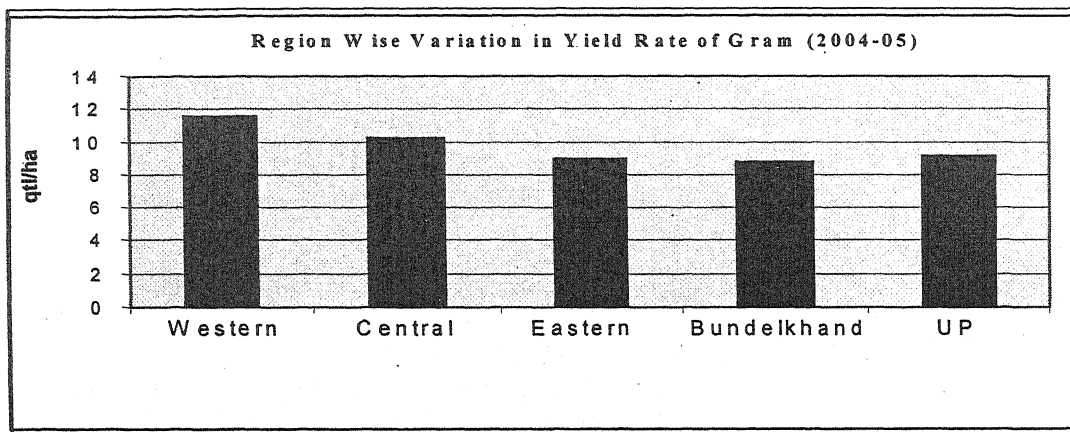
**Table 10: Districtwise Fertilizer Consumption in Bundelkhand (in Kg. per Hectare)**

District/Region	Nitrogen		Phosphatic		Potash		Total Fertilizer Consumption	
	1991	2001	1991	2001	1991	2001	1991	2001
Jalaun	24.12	42.42	11.8	24.35	0.45	0.46	36.37	67.05
Jhansi	19.49	31.98	10.95	25.84	0.28	0.35	30.73	58.17
Lalitpur	15.1	16.87	15.06	15.62	0.12	0.33	30.28	32.82
Hamirpur	12.85	19.84	8.33	14.01	0.13	0.04	21.3	33.89
Mahoba	NA	14.12	NA	14.57	NA	0.35	NA	29.04
Banda	15.55	14.63	7.28	8.82	0.24	0.21	23.07	23.66
Chitrakoot	NA	25.79	NA	14.99	NA	0.01	NA	40.79
Bundelkhand	16.93	24.06	9.92	17.28	0.24	0.27	27.09	41.61
Uttar Pradesh	66.35	95.54	17.82	32.27	3.78	7.91	87.95	135.72

Source : Directorate of Agriculture, Lucknow

The following charts show the yield differentials among regions for the major crops:





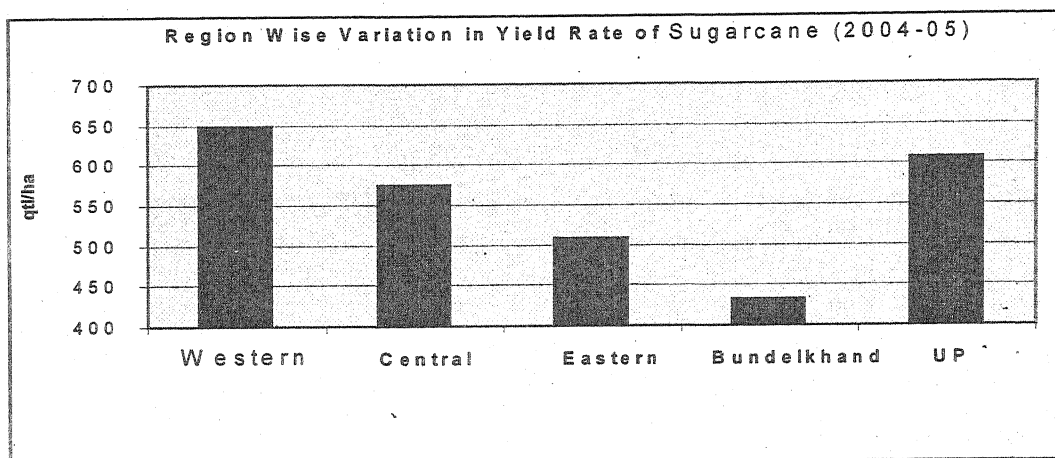


Table 11 presents the growth rates of area, production and average yield for different crops in the region for the period 1990-91 to 2005-06 as well as two sub-periods, viz. 1990-91 to 1999-2000, 1999-2000 to 2005-06. The comparative picture of growth rates at the state level has been shown in Table 12.

**Table 11: Growth Rates of Area, Production and Average Yield of Crops in Bundelkhand**

Crop	Between 1990-91 to 1999-2000			Between 1999-2000 to 2005-06			Between 1990-91 to 2005-06		
	Area	Production	Average Yield	Area	Production	Average Yield	Area	Production	Average Yield
Wheat	2.00	6.32	4.24	-1.74	-4.29	-2.61	0.49	1.94	1.44
Rice	-0.04	2.47	2.50	-5.42	-11.11	-6.01	-2.23	-3.20	-0.99
Gram	-0.72	-0.75	-0.02	-3.83	-3.50	-0.35	-1.98	-1.86	-0.12
Total Pulses	1.08	2.04	0.95	2.67	-0.54	-3.12	1.72	1.00	-0.70
Total Food Grains	0.65	3.53	2.87	0.23	-3.06	-3.27	0.48	0.84	0.36
Total Oilseeds	3.56	5.89	2.25	2.18	-1.72	-3.82	3.00	2.78	-0.22
Potato	1.21	3.13	1.90	0.55	0.49	-0.05	0.94	2.07	1.11
Sugarcane	-0.72	-0.75	-0.02	-3.83	-3.50	0.35	-1.98	-1.86	0.12

Source: Calculated from data obtained from Director of Agriculture, U.P.



**Table 12: Growth Rates of Area, Production and Average Yield of Major Crops in U.P.**

Crops	Growth Rate 1990-91 to 1999-00			Growth Rate 1999-00 to 2005-06			Growth Rate 1990-91 to 2005-06		
	Area	Production	Average Yield	Area	Production	Average Yield	Area	Production	Average Yield
Wheat	1.16	3.95	2.76	-0.33	-1.48	-1.16	0.56	1.74	1.17
Rice	0.89	2.87	1.96	-0.59	-2.02	-1.44	0.30	0.89	0.59
Gram	-4.76	-3.97	0.83	-3.54	-4.41	-0.91	-4.27	-4.15	0.13
Total Pulses	-1.32	-0.82	0.51	-0.36	-2.55	-2.20	-0.94	-1.51	-0.58
Total Foodgrain	0.33	2.93	2.59	-0.80	-1.88	-1.09	-0.12	0.98	1.10
Total Oilseeds	-0.43	0.04	0.48	-0.66	0.50	1.16	-0.52	0.22	0.75
Potato	3.08	5.04	1.90	0.31	0.25	-0.05	1.96	3.10	1.11
Sugarcane	0.90	1.21	0.31	0.49	0.78	0.30	0.73	1.04	0.31

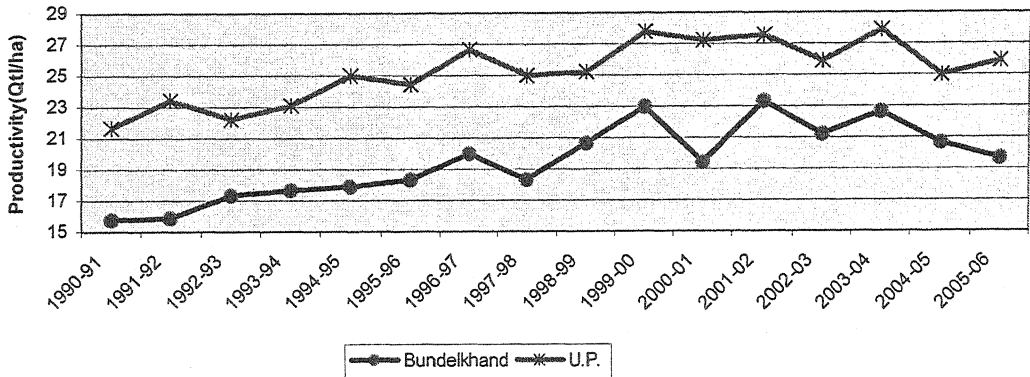
*Source: Calculated from data obtained from Director of Agriculture, U.P.*

Agricultural sector showed dynamism during the nineties, with the expansion of irrigation facilities in the region. In fact, Bundelkhand region out performed the agricultural growth in the state during this period. Foodgrain production registered a very high growth of output at 3.5 percent per annum during 1990-99, mainly due to high increase in yield rates. Main contribution came from the growth of output of wheat crop (6.3 percent per annum) during this period. Rice output also registered a handsome growth of 2.5 per cent per annum during the period. Pulses also recorded a positive growth of about 2 per cent, though gram output declined. Among the non-foodgrains oilseeds and potato also registered good growth rates during the decade.

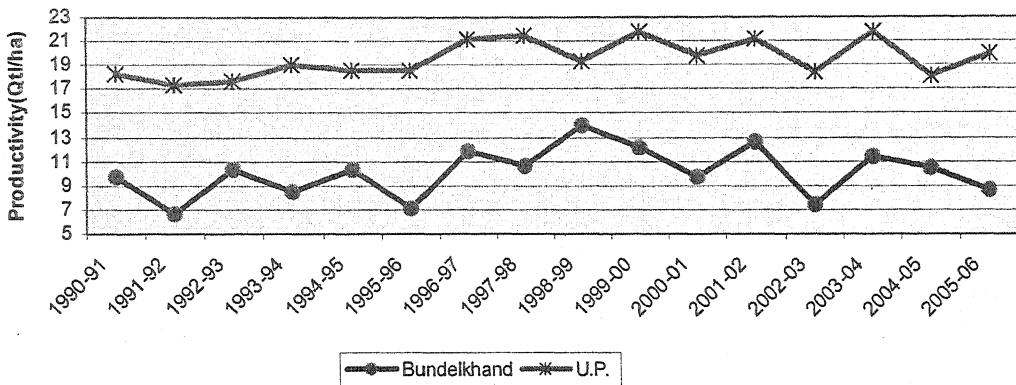
However, the period between 1999-2000 and 2005-06 recorded negative growth rates in almost all crops in the region due to four years of consecutive droughts. The agriculture suffered a setback in the state as a whole also during this period, but the decline was sharper in Bundelkhand region.

The region and its districts are marked by high variability in the productivity levels of crops from year to year depending on the rainfall conditions. The following charts bring out this fact sharply.

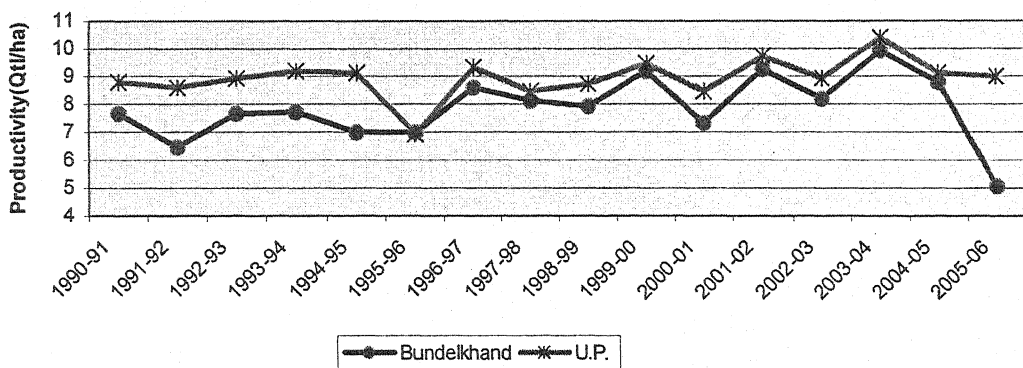
Trend in Productivity (Wheat)

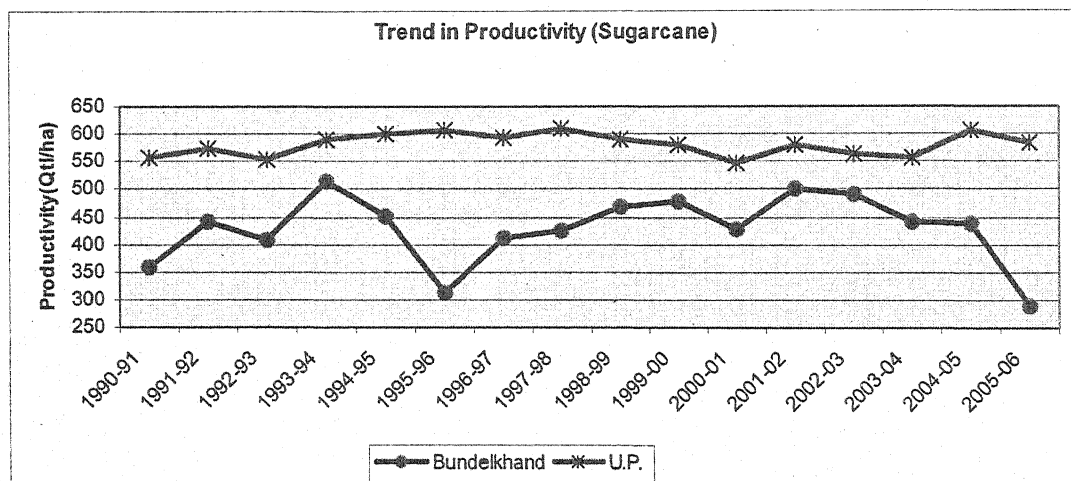
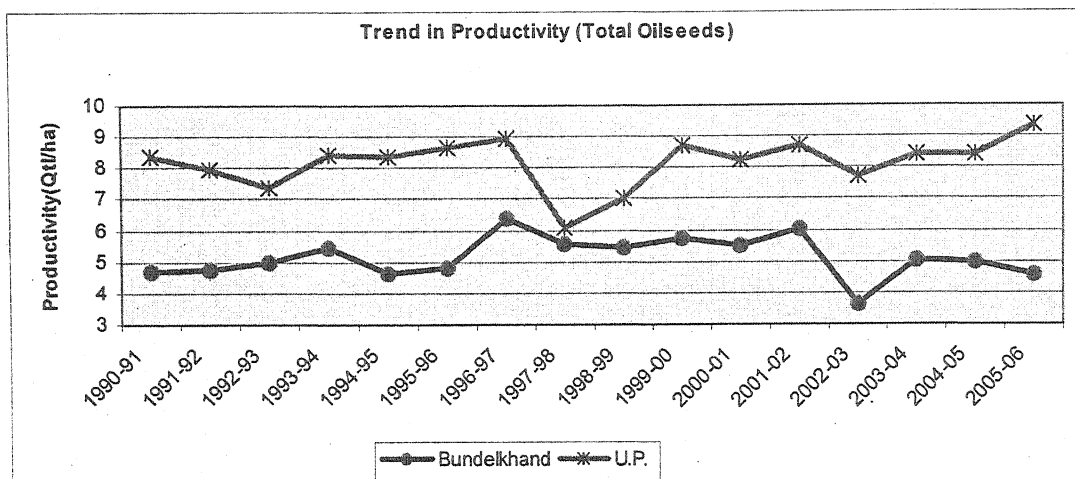
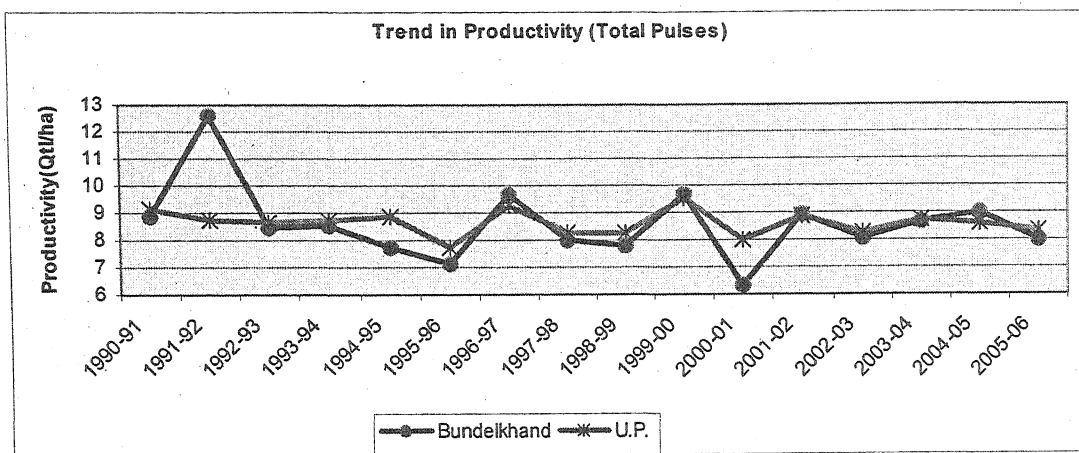


Trend in Productivity (Rice)



Trend in Productivity (Gram)





## 7. Food Security Situation

The region has a typical terrain, receives relatively low rainfall and has low levels of irrigation. The soil has low water retaining capacity and some areas are faced with problem of water logging. As a result of these climatic conditions some areas are drought prone. During the last four years agriculture has suffered because of these conditions. Consequently there are areas where people face the problem of food scarcity during specific months of the year. Particularly July, August and September are the months of food scarcity when people face a problem. In recent years the region has received much media and political attention due to the distress conditions which prevailed in the region. Even some starvation deaths were reported from the region. It is, therefore, worthwhile to study the food security situation in the region.

In order to have an idea of foodgrains availability the per capita availability of food grains a time series from 1997-98 to 2005-06 has been worked out for Bundelkhand and its seven districts with corresponding figures for state as a whole. Detailed information is provided in Table 13. In view of the fact that area cultivated per person is larger in Bundelkhand, we find that per capita output of foodgrains is much larger in Bundelkhand as compared to the state as a whole. This is also true for all the districts of the region. Foodgrain availability per capita is relatively lower in the districts of Jhansi, Banda, and Chitrakoot as compared to other districts of the region. However, even these districts compare well with the all state average.

**Table 13: District wise Per Capita Availability of Food Grains in Bundelkhand (in Kgs)**

Year	Jhansi	Lalitpur	Jalaun	Hamirpur	Mahoba	Banda	Chitrakoot	Bundelkhand	U.P.
1997-98	293	423	327	377	369	280	265	326	269
1998-99	251	367	360	385	355	353	317	335	257
1999-00	325	411	473	440	409	334	292	382	287
2000-01	266	343	364	315	240	269	249	296	262
2001-02	338	351	491	365	350	327	293	365	266
2002-03	285	241	451	331	248	262	273	306	226
2003-04	312	397	460	380	312	333	327	362	258
2004-05	266	411	446	273	377	289	260	330	228
2005-06	213	363	412	299	222	230	215	281	230
CV %	10.74	10.42	11.56	11.92	17.97	11.75	9.79	7.93	6.75

*Source: Calculated from official data on production and projected population.*

One, however, observes year to year fluctuation in per capita foodgrain production. Per capita availability in the region has fluctuated between 281 kgs. in 2005-06 to 382 kgs. in 1999-00. In fact, 1999-2000 turns out to be the best year in this respect across all districts, region and the state. Even across the seven districts yearly fluctuations are visible and 2005-06 remains the worst year with the exception of Jalaun which has highest per capita availability among all districts each year except during 1998-99 when it was ranked third behind Hamirpur and Lalitpur.

Overall Bundelkhand region is a surplus region in terms of foodgrain production. Even in bad agricultural years per capita foodgrains output in the region is generally above the state average by a good margin. The real problem seems to be that of access of the poor to food specially during the monsoon months when demand for agricultural labour is less in the region and they have to migrate to other places in search of employment. The problem needs to be addressed by scaling up the government employment generation programmes during the lean season and strengthening the PDS system.

## **8. Industrial Base and Growth**

Bundelkhand region does not have a properly developed industrial base. In fact, the region has suffered a decline over time in this respect. Thus, the total number of working factories had declined from 139 during 1990-91 to 112 in 1999-2000, but again increased to 147 by 2004-05 (Table 14). The number of factory workers also declined very sharply from 12138 in 1990-91 to 3763 in 1999-00. The figure improved a little to 4769 in 2004-05. The number of workers per factory has also declined from 87 in 1990-91 to around 32 in 2004-05.

The main reason of decline in number of industrial units and workers was that a number of industrial units based in Kanpur had located themselves in Bundelkhand to take advantage offered to industry in the backward regions. After availing the benefits they switched back there operation to Kanpur.

Despite the fact that total registered units have declined since 1999-2000 the total investment has registered an increase of around 9 per cent. Similarly total output has gone up considerably and this has resulted in a much higher value of both net value added as well as net value added per worker. This shows that some of the units have the potential to contribute positively towards the growth of the industrial sector. This in turn will facilitate the growth of similar activities and help in strengthening the industrial base of the region.

**Table 14: Details of Registered Factories in Bundelkhand**

Details	1990-91	1999-2000	2004-04
No. of Working Factories	139	112	147
Total Investment (Lakhs)	14651.79	43995.77	50282.05
Raw Material Consumed (Rs. Lakhs)	19065.22	56430.53	91501.17
Total Inputs (Rs. Lakhs)	22242.31	73768.4	118686.86
Total Output (Rs. Lakhs)	29035.82	97641.12	163559.62
GVA (Rs. Lakhs)	N.A	23692.72	44872.76
Net Value Added (Rs. Lakhs)	5814.66	21452.36	42775.81
Total Workers	12138	3763	4769
Total Employees	15496	5190	6293
Net Value Added per worker (Rs. 000)	47900	57009	896960

*Source: Annual Survey of Industries.*

Most of the industrial units are concentrated in Jhansi, which is better placed in terms of infrastructure and location (Table 15). Out of the 147 factories in the region, as many as 74 were in Jhansi. Jalaun with 29 working units was second, while Hamirpur and Mahoba each had 15 units. Banda and Chitrakoot had a very poor industrial base having only 4 and 2 registered factories respectively in the district.



**Table 15: District wise Details of Registered Factories in Bundelkhand**

(Amount in Rs. Lakhs)

Details	Year	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot
No. of Registered Factories	1999-00	58	158	16	29	31	12	6
	2004-05	31	80	11	16	15	4	2
No. of working Factories	1999-00	28	52	5	13	7	6	1
	2004-05	29	74	8	15	15	4	2
Total Investment	1999-00	10050	25950	3035	3598	134	341	437
	2004-05	10707	26347	4623	6731	245	92	1577
Total Inputs	1999-00	62243	34469	7014	10002	998	479	46
	2004-05	28726	58935	3299	22311	339	252	4824
Total Output	1999-00	85488	41490	8705	10953	400	521	98
	2004-05	44329	70165	3436	34477	435	333	10384
Net value Added	1999-00	21336	6046	1555	659	-608	25	41
	2004-05	15211	10117	26	11772	68	79	5503
Total Workers	1999-00	532	2404	201	299	34	282	11
	2004-05	790	3095	159	420	71	54	180
Total Employees	1999-00	678	3470	271	356	47	354	14
	2004-05	956	4241	221	499	113	66	197
Net Value Added per worker (Rs)	1999-00	4010526	251498	773632	220401	-1788235	8865	372727
	2004-05	1925443	326882	16352	2802857	95775	146296	3057222

Source: Annual Survey of Industries.

The most important industrial activity in the region is stone crushing, shaping and finishing (Table 16). These units are found in each district except Jalaun and Chitrakoot. The industrial base of Jhansi and Jalaun is more diversified as compared to other districts. The other units are found engaged in bakery products, basic chemicals, casting of metals, hydro-generated oils, cosmetics, iron and steel, grain mill products, medicines, spinning and weaving of cotton, non-metallic mineral products and plastic products. This goes to show that the base, although small comprises of some important units such as chemicals, medicines, non-metallic mineral products and plastic products, etc. which are of foot-loose nature and can be developed easily provided a conducive atmosphere is provided for their growth by way of assured power supply, marketing network and other infrastructure facilities.

**Table 16: District Wise Main Industry Groups found in Bundelkhand**

Industry Groups	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot
Stone Crushing and Finishing	--	√	√	√	√	√	--
Bakery Products	√	--	√	--	--	--	--
Basic Chemicals	√	--	--	--	--	--	√
Casting of metals	--	√	--	√	--	--	--
Hydrogenated Oils	--	√	--	√	--	--	--
Cosmetics	√	--	--	√	--	--	--
Cement	--	--	--	√	--	--	--
Iron and Steel	--	√	--	√	--	--	√
Paper and Paper products	√	√	--	--	--	--	--
Grain Mill products	--	--	--	--	√	√	--
Medicines	√	√	√	--	--	--	--
Garments	√	--	--	--	--	--	--
Leather Products	√	--	--	--	--	--	--
Spinning and Weaving of Cotton	--	√	--	--	--	√	--
Non Metallic Mineral Products	--	√	--	--	--	√	--
Plastic Products	--	√	√	--	--	--	--
Vegetable Oils and Fats	√	--	--	--	--	--	--
Dairy Products	--	√	--	--	--	--	--
Printing and Publishing	--	√	--	--	--	--	--
Steel Products	--	--	--	--	--	--	√

Source: Annual Survey of Industries.

The number of small scale industrial units has increased from 5602 in 1994-95 to 9905 in 2007-08 (Table 17). It is encouraging to note that total employment has more than doubled during this period. The small scale industries are a mix of traditional units such as handlooms and handicrafts as well as some modern units such as engineering, chemical and processing units. However, one has to be slightly careful about these figures because these are figures based on at the time of registration. There is no detail regarding the actual number of these units which are functioning in the region.

The number of rural and khadi industries in the region was 7368 in 1994-95, which increased to 8843 by 2007-08. Employment in these units has registered a sharper increase over the period from 8757 to 14934. Average employment per unit was 1.19 in 1994-95, which increased to 1.67 in 2007-08.



**Table 17: Details of Small Scale Industries in Bundelkhand**

Item	1994-95	2007-08
<b>A. Number of Units</b>		
Engineering	860	1344
Chemical	464	519
Processing	766	562
Handloom	367	793
Coconut/Jute	124	258
Handicrafts	1466	1548
Others	1555	4881
<b>Total</b>	<b>5602</b>	<b>9905</b>
<b>B. Total Employment</b>	<b>12217</b>	<b>28554</b>
Average Employment per SSI Unit	2.18	2.88

Source: Directorate of Economics and Statistics, State Planning Institute, Lucknow.

## 9. Infrastructure Development

We may now examine the status of infrastructure in the region. Brief details about the economic and social infrastructure in the region have been given below.

### Education

A look at the educational facilities highlights the fact that Bundelkhand is better placed in terms of Junior and Senior Basic Schools per lakh of population. In terms of higher secondary schools it is at par with the state average (Table 18). Similarly, it has a better student- teacher ratio when compared to the state average. The table also shows that there has been a clear improvement in educational infrastructure in the region since 1990-91.

**Table 18: Details of Educational Facilities**

Details	Year	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot	Bundel- khand	UP
No. of Junior Basic School per lakh of Population	1990-91	85	64	81	64	NA	68	NA	71	57
	2006-07	134	93	89	93	105	102	104	104	74
No. of Senior Basic School per lakh of Population	1990-91	16	12	12	14	NA	12	NA	13	11
	2006-07	54	35	29	39	47	36	36	39	24
No. of Higher Secondary School per lakh of Population	1990-91	6	4	2	3	NA	3	NA	4	4
	2006-07	10	8	5	7	7	6	6	7	8
Student per teacher in JBS	1990-91	46	54	82	61	NA	60	NA	58	52
	2006-07	85	73	88	75	69	67	67	74	88
Student per teacher in SBS	1990-91	35	32	34	26	NA	37	NA	33	33
	2006-07	52	44	33	41	16	36	26	35	82
Student per teacher in Higher Secondary Schools	1990-91	54	46	73	55	NA	53	NA	53	49
	2006-07	35	37	53	47	41	43	47	40	49

Source: Economic and Statistics Division, SPI, Lucknow.

## Health Facilities

In case of different types of medical facilities per lakh of population Bundelkhand is in a much better position as compared to the state as a whole (Table 19). However, it should also be noted that the number of hospital, dispensaries and number of beds in hospitals per lakh of population have gone down as compared to 1990-91 both in Bundelkhand and in U.P. This indicates that the medical facilities have not expanded as rapidly as the population.

**Table 19: Details of Medical Facilities**

Details	Year	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot	Bundelkhand	UP
No. PHC's per lakh of population	1990-91	3.15	3.60	2.82	4.00	--	0.76	--	2.74	2.35
	2006-07	2.41	3.13	2.70	3.57	1.80	2.90	3.02	2.84	1.70
No. of Unani/Ayurvedic/ Homeopathic institutions per lakh of population	1990-91	3.90	1.84	6.17	3.11	--	3.54	--	3.44	2.30
	2006-07	3.99	1.62	5.13	5.08	1.29	3.58	1.73	3.23	2.07
No. of Allopathic Institution per lakh of population	1990-91	3.90	4.73	5.09	3.31	--	4.41	--	4.22	3.35
	2006-07	3.04	4.85	3.33	7.85	4.77	4.17	6.91	5.34	2.97
Beds per lakh of population in Ayurvedic/ Unani/ Homeopathic institutions	1990-91	12.19	8.83	18.90	7.52	--	10.50	--	10.75	7.75
	2006-07	11.98	4.85	15.40	12.40	2.06	8.90	0.86	8.40	5.72
Beds per lakh of population in Allopathic institutions	1990-91	34.58	129.12	44.37	27.19	--	39.06	--	55.41	50.28
	2006-07	33.41	99.34	47.10	34.61	22.92	30.71	25.37	47.00	36.80

Source: Economic and Statistics Division, SPI, Lucknow.

## Power

The region is lagging behind in terms of power availability. Electricity consumption per capita in Bundelkhand during 2006-07 was only 141.8 KWh as compared to 180.4 KWh in the State as a whole. During the period under study a distinct change in pattern of power consumption has taken place (Table 20). During 1990-91 about 21 per cent of the total electricity consumption was in the domestic sector in the region, while agriculture and industry accounted for 36 and 33 per cent of the total consumption respectively. By 2006-07 the share of the domestic sector jumped to almost 40 per cent. On the other hand, the share of agriculture and industry declined to around 19.5 and 20.8 per cent respectively.

**Table 20: Pattern of Power Consumption by Sector**

District	Share in Electricity Consumption (%)							
	Domestic		Agriculture		Industry		Others	
	1990-91	2006-07	1990-91	2006-07	1990-91	2006-07	1990-91	2006-07
Jalaun	8.2	34	53.7	14.1	32.8	45.5	5.3	6.4
Jhansi	32.1	58.4	13	5.1	45.3	27.6	9.6	8.9
Lalitpur	31.8	42.9	6	12.7	23.6	7.4	38.6	37
Hamirpur	10.4	11.3	39.2	35.8	25.7	49.1	24.7	3.8
Mahoba	NA	55.9	NA	6.4	NA	25.3	NA	12.4
Banda	13	28.7	62.9	52.1	16.2	5	7.9	14.2
Chitrakoot	NA	32.3	NA	NA	NA	23.4	NA	NA
<b>Bundelkhand</b>	<b>21</b>	<b>39.7</b>	<b>36.3</b>	<b>19.5</b>	<b>32.9</b>	<b>20.8</b>	<b>9.8</b>	<b>20</b>
UP	14.9	50.0	33.6	17.2	41.4	20.8	10.1	12

Source: Economic and Statistics Division, SPI, Lucknow.

The region has made remarkable progress in terms of the percent of villages electrified (Table 21). In 1990-91 the percentage of electrified villages in Bundelkhand was about 61 per cent, which was much below the State average (around 73.5 per cent). But there was a quantum jump in percentage of electrified villages since then. By 2006-07 almost 94 per cent of the villages in the region were electrified as compared to 85.3 per cent villages in U.P. The situation in Chitrakoot district was however, below the state average.

**Table 21: Percent of Electrified Villages**

District	1990-91	2006-07
Jalaun	66.9	92.2
Jhansi	67.6	100.0
Lalitpur	46.9	97.4
Hamirpur	58	92.5
Mahoba	NA	99.0
Banda	61.4	95.6
Chitrakoot	NA	79.3
<b>Bundelkhand</b>	<b>60.7</b>	<b>93.9</b>
UP	73.4	85.3

Source: Economic and Statistics Division, SPI, Lucknow.

## Roads

Total road length per lakh of population increased from 83.88 kms. to 111.60 kms. between 1990-91 and 2005-06. During both the years the figure was above the State average. Road length per 1000 sq. km. of area also registered an increase from 191.52 kms. in 1990-91 to 337.72 kms. in 2005-06. However, the figure was far below the corresponding figures of 334.88 kms and 670.73 kms. obtained at the State level (Table 22).

**Table 22: Road Length in Bundelkhand (kms)**

District	Total Road Length per lakh of population		Total Road Length per 1000 sq km	
	1990-91	2005-06	1990-91	2005-06
Jalaun	90.07	125.70	240.53	428.48
Jhansi	84.12	74.20	237.26	278.66
Lalitpur	105.98	132.46	158.17	284.78
Hamirpur	137.40	132.46	296.95	324.60
Mahoba	-	143.48	-	380.37
Banda	105.13	111.27	328.16	398.65
Chitrakoot	-	88.80	-	253.48
Bundelkhand	83.88	111.60	191.52	337.72
UP	61.12	88.85	334.88	670.73

*Source: Economic and Statistics Division, SPI, Lucknow*

## 10. Net Domestic Product: Structure and Growth

Per capita income is an indicator of the overall development and economic well being of any region. Table 23 provides district wise information related to NDP in the region. Primary share contributed 42 per cent of NDP in the region in 1999-00. The share declined to 36.8 per cent in 2005-06. On the other hand, the share of tertiary sector increased from 42 per cent to 48 per cent. The share of secondary sector, however, remained stable at 15 per cent. The contribution of secondary sector to NDP is lower in the region as compared to that of U.P., but that of the other two sectors is somewhat higher.

There are important differences in the economic structure among the districts. Thus, the share of primary sector varies from 24.7 per cent in Jhansi to as high as 47.2 percent in Lalitpur. In terms of secondary sector's share the position is reverse with Jhansi having the highest share (20.5%) and Lalitpur lowest share (9.9%). In case of tertiary sector also similar position is found i.e. the share varying from 42.8 % in Lalitpur to 54.8 per cent in Jhansi.

The share of primary sector in NDP has declined in all the districts and that of tertiary sector shows an improvement between 1999-00 and 2005-06. In case of secondary sector the picture is mixed as three districts show a decline and four districts show a rise.

**Table 23: Percent Share of Different Sectors in NDP**

Year/Sector	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot	Bundelkhand	UP
<b>1999-2000</b>									
Primary	44.05	28.36	47.69	48.48	52.85	45.33	46.08	41.94	38.18
Secondary	15.67	22.63	11.19	11.59	10.39	13.22	12.59	15.48	19.01
Tertiary	40.28	49.01	41.12	39.93	36.76	41.45	41.33	42.58	42.81
Total	100	100	100	100	100	100	100	100	100
<b>2005-06</b>									
Primary	43.78	24.73	47.18	39.31	43.35	36.21	36.32	36.81	34.77
Secondary	10.78	20.46	9.94	14.87	13.68	16.98	13.33	15.16	18.24
Tertiary	45.44	54.81	42.88	45.82	42.97	46.81	50.35	48.03	46.99
Total	100	100	100	100	100	100	100	100	100

Source: Economic and Statistics Division, SPI, Lucknow

Per capita NDP stood at Rs. 13250 in Bundelkhand in 2005-06, almost at par with the state average. There are, however, differences across districts in per capita NDP, which varies from a low of Rs. 8026 in Chitrakoot to Rs. 17122 in Jhansi (Table 24). Between 1999-00 and 2005-06 per capita NDP at constant prices grew at a rate of nearly 2.5 per cent per annum in Bundelkhand almost equal to the rate of growth at the state level. But there were marked inter district variations in growth rate of per capita income in the region. Lalitpur was the fastest growing region during this period followed by Jhansi. Chitrakoot, Hamirpur and Jalaun registered relatively lower growth rate.

**Table 24: Districtwise Per Capita NDP in Bundelkhand (Rs.)**

Year	Jalaun	Jhansi	Lalitpur	Hamirpur	Mahoba	Banda	Chitrakoot	Bundelkhand	UP
<b>1999-2000</b>	10018	12142	8455	9808	10813	7688	6047	9519	9405
<b>2005-06</b>									
Current Prices	14110	17122	12962	12464	14270	11044	8026	13250	13262
Constant Prices (1999-2000)	10977	14393	10432	9996	11684	8849	6567	10744	10637
CAGR %	1.84	3.46	4.29	0.38	1.56	2.85	1.66	2.45	2.49

Source: Economic and Statistics Division, SPI, Lucknow

## 11. Per capita Consumption Trends

Table 25 provides information on per capita consumption expenditure in different regions of U.P. based on NSS rounds. In 1993-94 per capita monthly consumption expenditure was lowest in Bundelkhand and much below the state average both in rural and urban areas. However,

consumption expenditure increased by 50 per cent in the region between 1993-94 and 2004-05. As a result consumption expenditure in rural areas in Bundelkhand caught up with the state average. However, in the urban areas consumption levels are still the lowest in this region despite significant improvement in the level of consumption over the period.

**Table 25: Trends in Per Capita Consumption Expenditure in U.P. (in Rs./month)**

Region	Rural			Urban		
	1993-94	2004-05	% change	1993-94	2004-05	% change
Western	323.53	327.81	1.32	435.64	456.47	4.78
Central	239.47	305.74	27.67	356.38	556.82	56.24
Eastern	249.70	277.42	11.10	350.48	384.16	9.61
<b>Southern</b>	<b>198.28</b>	<b>298.89</b>	<b>50.74</b>	<b>232.50</b>	<b>347.67</b>	<b>49.54</b>
State	271.31	300.79	10.86	386.80	457.03	18.15

*Source: NSS 50<sup>th</sup> and 61<sup>st</sup> Central Sample.*

## 12. Poverty Levels and Trends

We have here analyzed regional poverty status in Uttar Pradesh on the basis of household consumer expenditure surveys conducted by National Sample Survey Organisation from time to time. Poverty line has been taken at Rs. 365.84 for rural sector and Rs. 483.26 for urban sector for the year 2004-05, as calculated by Planning Commission, Govt. of India, for U.P. On the basis of regional price index for the year 1999-2000 prepared by the Department of Economic and Statistics, U.P., it has been observed that sector-wise price variation between regions is small.

Region wise estimates of poverty for the year 1993-94 and 2004-05 on the basis of data collected in NSS state sample 61<sup>st</sup> round are presented in Table 26. It will be observed that poverty incidence was very high in Bundelkhand region in 1993-94, when 68.9 per cent of rural population and 74.4 per cent of urban population was below poverty line. Poverty levels were significantly above the state average in this region. However, the region has experienced a very dramatic decline in poverty levels between 1993-94 and 2004-05. Thus poverty ratio came down to 39.8 percent in 2004-05 in the region from 68.9 per cent in 1993-94. The rate of decline in poverty was also much sharper in this region as compared to other regions of the state. Eastern region now has the highest level of poverty in the state. However, it needs to be noted that the poverty ratio in Bundelkhand is relatively still very high.



**Table 26: Regional Trends in Poverty in Uttar Pradesh**

Regions	Poverty Headcount			Distribution of Poor %			Distribution of Population %		
	1993-94	2004-05	Change	1993-94	2004-05	Change	1993-94	2004-05	Change
<b>Total</b>									
Western	29.8	25.1	-4.7	27.2	28.9	1.7	28.1	27.6	-0.5
Central	46.7	28.8	-17.9	20.7	16.4	-4.3	18.5	18.6	0.1
Eastern	47.5	41.0	-6.5	43.4	48.6	5.2	38.1	38.8	0.7
Bundelkhand	68.9	39.8	-29.1	8.7	6.1	-2.6	5.3	5.0	-0.3
<b>Uttar Pradesh</b>	<b>41.7</b>	<b>32.7</b>	<b>-9.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>
<b>Rural</b>									
Western	29.3	24.1	-5.2	24.0	24.8	0.8	35.4	34.3	-1.1
Central	50.2	30.1	-20.1	21.0	16.1	-4.9	18.1	17.8	-0.3
Eastern	48.8	41.4	-7.4	46.9	53.4	6.5	41.4	43.0	1.6
Bundelkhand	67.4	38.9	-28.5	8.0	5.7	-2.3	5.1	4.9	-0.2
<b>Uttar Pradesh</b>	<b>43.1</b>	<b>33.3</b>	<b>-9.8</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>
<b>Urban</b>									
Western	31.1	28.0	-3.1	42.7	47.3	4.6	49.5	50.9	1.4
Central	33.9	24.6	-9.3	18.9	18.0	-0.9	20.2	22.0	1.8
Eastern	38.6	37.5	-1.1	26.2	26.7	0.5	24.5	21.5	-3.0
Bundelkhand	74.4	43.0	-31.4	12.2	7.9	-4.3	5.9	5.6	-0.3
<b>Uttar Pradesh</b>	<b>36.0</b>	<b>30.1</b>	<b>-5.9</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

Source: NSS 50<sup>th</sup> and 61<sup>st</sup> round Central Sample.

The actual number of poor in different regions has been shown in Table 27.

**Table 27: Regional Population Profile (Numbers)**

Region	Rural		Urban		Total	
	Total	Poor	Total	Poor	Total	Poor
Western	46,440,031	11,461,940	15,920,842	1,920,784	62,360,873	13,382,724
Central	22,514,059	6,250,891	6,817,862	838,637	29,331,921	7,089,528
Eastern	61,140,083	23,215,573	6,441,825	1,175,460	67,581,908	24,391,033
Southern	6,745,857	1,135,541	1,724,816	197,947	8,470,673	1,333,488
<b>State- UP</b>	<b>136840030</b>	<b>42,063,945</b>	<b>30,905,345</b>	<b>4,132,828</b>	<b>167745375</b>	<b>46,196,773</b>

Source: NSS 61<sup>st</sup> round Central Sample.

### Poverty By Social Groups

Caste status is considered to be a strong signifier of poverty in India, since certain castes, particularly scheduled castes and tribes often lack physical assets, and human and social capital, and are mainly confined to low paid occupations and hence according to social stratification

they are stuck up at the lower rung of the socio-economic hierarchy. The cumulative neglect has made them the most deprived section of the population. The incidence of poverty is much higher among SC/ST, compared to other castes, both in rural as well as in urban areas but it has declined faster than average decline in poverty in rural and urban areas in the state as a whole.

Table 28 shows poverty profile of rural areas by social groups in different regions of Uttar Pradesh in 2004-05. Poverty incidence is the highest (42.5 percent) among 'Scheduled Caste/Schedules Tribe (SC/ST) group followed by Other Backward Castes (OBC) being 30.0 percent. 37 percent of the poor of the state belong to SC/ST group while 53 percent poor belong to OBC group. It is evident that SC/ST in Eastern region is the most vulnerable group as regards poverty is concerned. It may be noted that in all the social groups poverty levels are lowest in Bundelkhand as compared to other regions. However, relative poverty among SC and ST group is highest even in this region. Difference in poverty groups among different groups is also lowest in this region.

**Table 28: Regional Poverty Profile In Rural Uttar Pradesh By Social Groups, 2004-05**

Region	SC/ST		OBC		Others		Total	
	Poverty incidence	Relative incidence	Poverty incidence	Relative incidence	Poverty incidence	Relative incidence	Poverty incidence	Relative incidence
Western	33.7	1.37	24.9	1.01	15.3	0.62	24.7	1.0
Central	37.3	1.34	25.1	0.90	18.8	0.68	27.8	1.0
Eastern	52.5	1.38	36.8	0.97	16.9	0.44	38.0	1.0
Bundelkhand	20.9	1.24	16.0	0.95	11.5	0.69	16.8	1.0
Uttar Pradesh	42.5	1.38	30.0	0.98	16.4	0.53	30.7	1.0

Source: NSS 61<sup>st</sup> Round

Note: Relative incidence is measured as a ratio to poverty of all groups in the region.

Table 29 shows regional profile of poverty by social groups in urban areas. It is noteworthy that in all the regions poverty levels are higher in urban areas as compared to rural areas. Thus, in Bundelkhand urban poverty ratio is 27.3 per cent against rural poverty ratio of 18.8 per cent. For SC and ST urban poverty ratio in the region is 41.3 per cent, which is 52 per cent higher than the poverty ratio of total population and nearly three times the poverty ratio of other groups. One third of OBC population in urban areas of the region is above poverty line, though the region has lowest poverty ratio for this group among regions.



**Table 29: Regional Poverty Profile In Urban Uttar Pradesh By Social Group, 2004-05**

Region	SC/ST		OBC		Others		Total	
	Poverty incidence	Relative incidence	Poverty incidence	Relative incidence	Poverty incidence	Relative incidence	Poverty incidence	Relative incidence
Western	39.0	1.26	38.4	1.24	16.8	0.54	30.9	1.0
Central	45.0	1.47	37.9	1.24	19.0	0.62	30.6	1.0
Eastern	57.8	1.39	50.4	1.21	16.9	0.41	41.7	1.0
<b>Bundelkhand</b>	<b>41.3</b>	<b>1.52</b>	<b>32.7</b>	<b>1.20</b>	<b>13.9</b>	<b>0.51</b>	<b>27.3</b>	<b>1.0</b>
Uttar Pradesh	44.0	1.34	40.9	1.24	17.3	0.53	32.9	1.0

Source: NSS 61<sup>st</sup> Round

Note: Relative incidence is measured as a ratio to poverty of all groups in the region.

### Poverty by Occupational Groups

Highest poverty levels in rural areas are found in case of agricultural labourers-39.1 per cent against the regional average of 16.8 per cent (Table 3). In case of other labour also poverty levels are above average. Self employed workers have low poverty incidence. It is also noticeable that for all occupational groups poverty ratios are lowest in Bundelkhand among all occupational groups except others.

**Table 30: Regional Poverty Profile In Rural Uttar Pradesh By Occupational Groups, 2004-05**

Region	Self-employed in Non-Agriculture	Agricultural Labour	Other Labour	Self-employed in Agriculture	Others	All Households
Western	23.73	41.61	30.61	20.00	12.63	24.68
Central	28.32	48.93	39.89	22.32	14.92	27.76
Eastern	41.07	60.80	60.32	28.5	26.63	37.97
<b>Bundelkhand</b>	<b>3.70</b>	<b>39.10</b>	<b>27.30</b>	<b>9.49</b>	<b>18.35</b>	<b>16.83</b>
Total	31.23	49.91	45.87	23.77	20.02	30.74

Source: NSS 61<sup>st</sup> Round

In the urban areas of the region poverty incidence are very high (57.2%) for casual labour households (Table 31). Self employed urban households also have above average poverty levels. But, regular wage/salary earners have the lowest poverty levels as would be expected. Similar pattern is observed in other regions of the state also.

**Table 31: Regional Poverty Profile In Urban Uttar Pradesh By Occupational Groups, 2004-05**

Region	Self Employed	Regular Wage/Salary Earning	Casual Labour	Others	Total
Western	32.26	16.81	51.98	23.42	30.92
Central	35.88	18.09	54.27	12.47	30.55
Eastern	42.89	22.49	76.54	38.82	41.68
<b>Bundelkhand</b>	<b>27.75</b>	<b>9.23</b>	<b>57.15</b>	<b>21.06</b>	<b>27.28</b>
Total	35.11	17.85	56.95	25.2	32.88

Source: NSS 61<sup>st</sup> Round

### 13. Amenities Available in the Households

The living condition of people of a region can be gauged from the amenities which they are enjoying. The Census of 2001 provides information about housing conditions and availability of amenities such as drinking water, households with sanitation, electricity, etc. District wise details about household amenities in the Bundelkhand region are provided in Table 30.

On the whole around 52 per cent of all households of Bundelkhand have permanent houses against the figure of 54 per cent in U.P. The best placed districts are Lalitpur and Jhansi where this share is 69.5 and 68 per cent respectively. Chitrakoot and Banda are at the bottom with only 22.1 percent and 25.6 per cent pucca houses respectively.

Only around 15.5 per cent households enjoy the facility of tap water against the state average of 23.7 per cent. Jhansi emerges as the district with around one-fourth households having access to tap water within their residence. Over one half of the total households depend on hand pump/ tubewells while the remaining 31 per cent procure water from wells. In Mahoba and Lalitpur wells are the most important source of water supply. Provision of safe drinking water in the region is, therefore, a matter of high priority.

**Table 32: District wise Amenities in the Households, 2001 (in %)**

District	Pucca Houses	Source of Drinking Water				Households with Latrine Facilities	Households with Bathroom Facilities	Households with Drainage Facilities	Households With Electricity
		Tap	Handpump/ Tubewell	Well	Others				
Jalaun	52.5	18.0	65.8	15.7	0.5	35.45	35.93	73.51	26.3
Jhansi	68.0	25.4	43.0	31.1	0.5	35.12	39.95	64.13	43.2
Lalitpur	69.5	12.4	42.8	44.3	0.5	17.18	18.09	39.4	20.3
Hamirpur	41.2	14.1	61.4	23.9	0.6	24.41	27.76	50.88	17.2
Mahoba	48.7	6.8	33.3	59.8	0.1	21.81	22.13	43.1	15.8
Banda	22.1	12.3	63.0	24.0	0.6	20.19	17.93	41.14	15.2
Chitrakoot	25.6	10.0	53.0	35.6	1.4	12.54	12.17	36.23	16.9
Bundelkhand	52.0	15.5	53.1	30.8	0.6	19.90	29.10	48.00	24.0
Uttar Pradesh	53.4	23.7	64.1	11.6	0.7	31.43	28.72	70.49	31.9

*Source: Census of Uttar Pradesh 2001*

Barely 20 per cent households in Bundelkhand have toilet facility against state average of 31.4 percent. Jhansi and Jalaun, being more urbanized districts, emerge as better placed districts where the share of households with toilets is around 35 per cent in each district. A majority of the households do not enjoy a bathroom within the dwelling since the overall percentage of households with the facility is around 29 only. Jhansi and Jalaun once again emerge as the more advantaged districts. Less than half the total households have proper drainage facilities in Bundelkhand. In this context Jalaun is ranked first and is followed by Jhansi.

Only 24 per cent of the households are electrified in Bundelkhand against 31.9 per cent in U.P. Once again Jhansi is found at the top with 43 per cent electrified households. Jalaun is second with only 26.3 per cent electrified households. The situation is quite bad in Hamirpur, Banda, Chitrakoot and Mahoba, where only one-sixth households have electricity.

Thus, the living conditions in Bundelkhand are far from satisfactory and need to be improved to ensure good quality of life to the people.

#### **14. Development Priorities in Bundelkhand Region**

The above analysis of the development situation in Bundelkhand reveals a mixed picture. In terms of economic and social infrastructure the situation of the region is comparable with that of the state as a whole except in case of rural electrification and households with electricity.

The per capita income of the region is also at par with the state level. Growth rate of NDP in the region also compares well with the state average. In the nineties the region experienced very high agricultural growth. Poverty levels which were extremely high in the beginning of the nineties have consequently come down very sharply and are now much below the state average. Per capita food availability in the region is high though there are annual fluctuations. Urbanisation in the region is relatively low and urban poverty ratios are quite high. Living conditions are, however, far from satisfactory and people are deprived of basic facilities like pucca houses, drinking water facilities, electricity connection, etc.

There are marked intra-regional disparities within the region. Jhansi is the most developed district followed by Jalaun, Lalitpur and Mahoba fall in the middle range. The level of development is comparatively much lower in Banda, Chitrakoot and Hamirpur. These districts present a more hostile environment and are water deficient.

The major handicap of the region is related to its geographical situation as it is located in the rocky and dry southern plateau. The soils have low water retention capacity. Due to heat when the soil cracks the moisture tends to evaporate from the lower level and the rate of evaporation is many times more than what the soil receives during monsoons. Moreover, there is a high tendency of soil erosion. Rains often fail in the region, which is hence drought prone. As a result distress conditions develop in pockets of the districts during parts of the year. In the absence on local employment opportunities in agriculture and other activities, people from rural areas are forced to migrate.

A relatively larger proportion of population in the region belongs to SCs. There are small pockets of tribal population also. Land question is also important and often a cause of social conflict. Inequality in land ownership is high. In the forest areas the question of local people's access to forest produce is a cause of social tension. As a result of this situation part of some districts have come under naxalite influence. Dacoit menace is another problem faced by the people in some parts particularly along the Chambal ravines.

As the Bundelkhand region presents a different physical scenario than the other parts of the state, it calls for a region specific strategy of development. Some suggestions in this respect are given below.

### **Agriculture**

As the region suffers from deficient irrigation facilities focus should be on developing and promoting the technology suitable for dryland agriculture. The region is suitable for citrus fruits and trees like *amla*. Pulse crops are grown over large part in the area, but their productivity needs to be enhanced. Soya been cultivation needs to be promoted in the region. In irrigated

parts horticultural and high value crops should be promoted. The state government is setting up an agricultural university in the region in Banda district, which will help in developing agricultural technology suitable for the area. Along with this agricultural training and extension services have to be strengthened.

Water conservation and harvesting is a major need of the area. There is an urgent need to recharge ground water resources for meeting the drinking and irrigation requirements of the people. Integrated watershed programme should be effectively implemented with peoples participation. Over the past few years some increase in water conservation has been achieved to counter the drought conditions. As a result of recurring drought conditions there has been some improvement in awareness level among people and the authorities are thinking in terms of bringing desired changes in policies.

Since rainfall received in this region is low there is a need to bring about appropriate changes and improvements in the means of irrigation on an area specific basis. It is desirable to adopt the policies which have been developed by the similar drought prone areas and try to replicate them according to the needs of the region. Some of the techniques could be the use of sprinklers, drip irrigation, construction of check-dams and ponds and go in for deep boring where the water table is low.

One of the old agricultural practices already prevalent in the region is the *Haveli Practice* under which cultivators store rain water on their fields itself. Once the monsoon season is over the stored water is drained out and Rabi crops are sown on the fields. This practice of water harvesting can easily be achieved on a much higher level with some efforts and water so conserved can also be utilized during the Kharif sowing period as well.

Though ground water resources of the region are limited, there is a scope of developing surface water schemes in the region. The linking of Ganga with Son, Ken and Betwa rivers can prove to be a boon for the region. The region also has a number of lakes and ponds and old water storage structures which need to be developed and renovated.

### **Forestry**

Bundelkhand region has only around 8 per cent of its total area under forests. Only the districts of Lalitpur and Chitrakoot have about one-sixth of their total area under forests. The quality of forest cover in the region needs to be improved. Efforts should be made to increase the forest cover in the region and improve its quality. This will be helpful in reducing soil erosion. A reasonable forest cover may also increase the plantation and growth of forest based products. This, in turn, will assist the living condition of the local people by providing additional incomes through sale of non-timber products such as medicinal and aromatic plants. However, for the development of such plants proper soil tests will have to be conducted so that the plants,

which can suitably be grown in the area, may be identified. Peoples' choice in selection of species should be kept in mind. Joint forest management programme should be effectively promoted so that the forest dwellers have a stake in developing and preserving the forest wealth.

### **Animal Husbandry and Dairying**

Bundelkhand region has a large livestock population. However, the quality of the livestock is poor and its productivity is low. Because of the low levels of rainfall and drought conditions there is inadequate supply of fodder. As a result the milk yield is rather low and even those who keep cows prefer to have local breed rather than go for crossbreed variety. A major problem in this region is the *Anna System* under which all poor quality milch animals are left after April upto 15 July to graze and drink water freely mainly because of lack of proper grazing and drinking facilities. This further affects the soil and causes damage to crops and discourages double cropping. This practice has to be stopped and stall feeding encouraged.

The dairy sector needs to be promoted by ensuring proper stock of fodder and other animal feed, provide better and timely veterinary services so that the cattle stock is looked after well. Once people are assured of these services then the dairy industry will develop. The existing milk cooperatives will automatically increase and more and more milk routes will be developed to ensure that surplus milk production is collected for sale in the market.

Bundelkhand has around 1.78 lakh sheep and another 11.6 lakh goats. The animal Husbandry Department can offer special incentive for sheep and goat rearing and this could give rise to setting up of a few woollen units. One advantage with goats in particular is that they require relatively less care and breeding them is much easier as compared to cattle breeding.

With large and surplus livestock population there is a good scope for promoting export of meat, hides and skins, etc. from the region with support of modern technology, credit and marketing facilities.

### **Industries**

Non-agricultural opportunities need to be created on a large scale in the region. The Industries Department needs to take account of the various factors, which have resulted in the decline of industries in the region. A policy package needs to be developed for providing the required incentives to the industries of this region. Jhansi has the advantage of location from the point of view of rail links to all the parts of the country. This can be worked to the advantage of the industries for procurement of inputs from different locations as well as for transportation of



the finished products to the point of sale. Steps have to be undertaken for the development of supporting infrastructure such as regulated power supply, better network of roads, banking and other facilities and a marketing network. If these facilities are developed the industrial base will automatically be strengthened.

The region has a good scope for developing cement, stone crushing and finishing and construction material related industries for which required raw material is available. Industries based on construction material like tiles, ready made building material, etc. should be promoted.

The region is believed to have other rich minerals also like dolomite, gold, gems, etc. Exploration of mineral wealth of the region should be taken up in a systematic manner.

The region also had some important centres of handlooms and traditional industries which have declined due to problems of raw material and competition from the factory sector. Efforts should be made to revive these industries.

Special Economic Zones can be set up in the region as waste land available for the purpose. Ancillary industries can be developed around these SEZs.

### **Tourism**

Bundelkhand region, if we also include some of the districts of Madhya Pradesh, has an important historical past as well and the various forts of the area bear a testimony of the same. Jhansi has played a significant role in the freedom struggle and the name of Rani Laxmi Bai is most prominent among the martyrs of the First War of Independence. The region is in close vicinity of Agra on the one hand and Khajuraho on the other. Thus, the area can be developed as a tourist destination by offering suitable tourist packages to cover the historical sites in and around Jhansi. The region also attracts religious tourists to Chitrakoot which has a very high religious significance for Hindus. The Tourism Department of the state needs to take full advantage of these factors particularly so because every year a large number of tourists both from India and abroad visit Agra in U.P. and Khajuraho in Madhya Pradesh, both of which are very close to Bundelkhand. Construction of an expressway linking Agra, Jhansi and Khajuraho can give a big boost to tourism and the regional economy.

### **Social Sectors**

The region can also be promoted as an educational hub. Jhansi already has a university, medical college and engineering college and the Central Grassland Institute. It should be developed as an educational centre through proper incentives. Jhansi medical college can be developed into a Post Graduate Medical Institute on the pattern of AIIMS. Government is planning to set up an agricultural university at Banda. A number of government medical colleges

have also been proposed for the region. The region has a number of old post graduate colleges, some of which can be developed as centres of excellence. The region has an advantage in as much as land for developing these activities is available. If government makes available land at concessional rates it can attract large private investment in educational institutions for technical and management education.

### **Food Security and Vulnerable Sections**

As we have pointed out above in some pockets of the region food scarcity and distress situation is prevalent during some parts of the year. These areas should be clearly identified and remedial measures induced to meet these challenges. Public distribution system needs to be strengthened in these areas in particular and timely availability of foodgrains should be ensured during times of scarcity. Foodgrain banks should be promoted in the area as has been done under the World Food Programme operating in some districts of the region.

Along with strengthening the food distribution system in these areas, what is needed is ensuring that people have income to access food. The National Rural Employment Guarantee programme provides a suitable mechanism through which employment and income can be provided to the needy sections.

### **Concluding Remarks**

For long Bundelkhand region has been known for its backwardness and poverty. But as our discussion above has shown, the region has made remarkable progress since the early nineties in reducing poverty and has recorded relatively satisfactory economic growth. The region has the potential for achieving a higher level of development in the various sectors provided the government comes out with suitable development strategy for different sectors of the region in the light of the resource potential and problems of the area on the lines suggested above.

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